Developing Teachers as Researchers: A Case Study in Collaborative Learning

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Abstract

This paper considers the findings of a case study exploring the development of non-researching Education lecturers on a staff development programme designed to help them prepare their first academic papers for peer review. The Research and Collaborative Enterprise for Staff (RaCES) programme used a facilitated approach to develop a community of practice centred on collaborative learning, creativity, and enterprise to guide participants to their first research paper in a 'safe' learning environment. The approach and the effects on the lecturers were investigated using narrative analysis underpinned by phenomenography and follows their learning journey as they prepare their research for peer review. The investigation used an open learning cycle based on an adaptation of Scharmer's Theory U (2009) to create data collection stages which helped identify critical aspects in the development of participants. The findings showed the creativity and collaborative learning approaches were instrumental in overcoming 'inhibitors' which caused an initial reluctance to begin researching due to a lack of confidence, confusion over-work prioritisation, limited self-esteem concerning research, and uncertainty of outcome. As all the participants were able to create peer reviewed research and the study found facilitators for research included a specific 'instigation event,' where they began to see their research as an impersonal object to be objectively considered, and peer support improved their self-esteem and motivated them to finish writing up their research.

Keywords: Lecturer, research, development, staff, group, collaboration, open learning cycle.

Introduction

This article reports on a small phenomenological case study designed to develop the research of 12 non-researching Education Lecturers from a teaching university in the North of England. Using narrative enquiry it explores a staff development programme entitled the Research and Collaborative Enterprise for Staff (RaCES). The programme was designed and investigated by the author as a collaborative learning programme to engage new university teachers with their first experience of peer review by presenting papers for an international conference or journal publication. Participants were invited onto the programme after a call for written ideas for enterprise education which could be developed into academic papers by academical justification as an innovative approach to learning. A review panel selected topics based on the likelihood of reviewable research emanating from their submission. Enterprise education was selected rather than topics related to the participants' teaching subject expertise to try and create some distance from their research and make critiques less personal. The call criteria excluded researching or previously research active staff.

After observing an initial reluctance to research amongst a group of recently appointed University Education lecturers I began to explore the academic literature for the reasons for their reluctance. Various reasons are given: the Education Endowment Foundation notes non-researching lecturers are unlikely to receive senior management support in the first instance (Education Endowment Foundation, 2016), they may be directed towards teaching and actively discouraged from researching (Stewart, 2015), suffer from work overload (Lucas and Turner, 2007) or be uncomfortable with the uncertainty of researching (Hemmings and Kay, 2010). Hancock (1997) notes school teachers in particular are reluctant to research. These form a series of inhibitors to begin researching, a perception of the lack of institutional value in research, teaching as a priority over research thus diminishing the status of research, uncertainty in the outcome of the investment in research, and finding time in a busy schedule to find research topics and investigate

them. This article will therefore examine the use of a facilitated collaborative learning approach using creativity and enterprise to overcome these inhibitors and assess the participants' views of the learning methodology used to help develop their research.

A detailed search of combined research academic databases showed some reports of teaching enhancements or staff development initiatives to encourage research. Fenge (2012) discusses the benefits of collaborative learning with doctoral students; Hemmings and Kay (2010) consider the importance of researcher self-efficacy on publication output, while Delvin and Radloff (2014) discuss the effect of a structured writing approaches on the development of researchers' publications. Browning et al. (2014, 2017) discusses the importance of developing researchers through researcher development plans and development programmes, but gives little details on the teaching and learning approaches involved in the programmes. I could find no studies on overcoming teachers' reluctance to begin researching due to these inhibiting factors that gave a detailed account of a programme.

Teaching and Learning Methodology

The programme was delivered to two groups of six participants attending eight sessions over four months with two four-hour sessions each month. The teaching and learning methodology initially centred on the need to overcome the inhibitors to research described above. Collaborative learning promotes positive social behavior like empathy, and helping skills is recognised in helping to build self-esteem (Gilies, et al., 2008). I felt this would be needed to begin the participants researching. Traditionally collaborative learning is viewed as individuals working towards a group endeavor (Barkley et al., 2014) but in the RaCES programme the individuals were working collectively to individual outcomes; so emphasis was made early in the programme to see the totality of research output among each group and was seen as an overall group objective. I also felt there was a need to encourage participants to discuss and reflect critically on their research early on in the programme. Hoggan (2014, 2016) finds the use of substitutes to take the focus away from the 'self' important in cancer patients in facilitating discussion on personal matters. I therefore introduced the concept of a physical representation in

their individual research by the substitution of an artefact created to represent the research to reflect on. The sessions were facilitated by a Lecturer from another University.

Key teaching and learning methodologies for the programme included:

- the enterprise idea created as a separate physical object to allow for critical comment and reflection;
- a facilitated collaborative learning approach based on creativity;
- continuing support and reflection to develop their ideas with others;
- the development of a community of practice (so research could be supported if it continued after the programme had finished);
- group reflection and critique;
- clear objectives and outcomes in a given timescale.

Reporting of collaborative learning often concentrates on students rather than academic staff (see Gokhale 1995; Barkley and Cross, 2014; Dodge and Kendal 2004). However, the staff in this project were also learning and some of the learning conditions reported in student studies have value here. Collaborative Learning has many benefits, including cross-subject learning, working together to solve problems, building skills by teaching and mentoring others, and building perspectives (Dodge and Kendall 2004).

Solomon et al. (2001) and Lorena et al. (2004) make comment on developing academics through collaborative group work, noting that academics often find it difficult to reflect on, talk about and identify their own learning. Lorena's was one of the few studies looking at group development in academics, but their programme experienced difficulties and failed to complete successfully. The paper settles for looking at experiences gained in running the programme rather than learner outcomes and successful methodologies.

There are many different approaches to developing collaborative learning in the classroom. (McKinnerney et al., 2004) describe collaborative classroom

approaches used by Jardine at Glasgow University in the 18th Century, which encouraged the tutor to be at the periphery of classes while letting students learn from each other. Brufee (1993) describes learning as a social process in which people learn from each other, while Panitz (1996:.1) defines collaborative learning as a personal philosophy where "people come together in groups," and work in a way which "respects and highlights individual group members abilities and contributions". Rhea (2010: 40) argues "Collaborative learning occurs when we stop relying on experts…to transfer their knowledge to us and instead engage together in making sense and creating meaning". This linked well to the intended creation of a new sustainable community of practice which could continue when the programme formally ended. This approach settled into a continuing philosophy amongst the participants. Panitz (1996) argues that consensus building is a key factor in collaborative learning and sees it as going beyond the learning group. While it was not critical for the RaCES group to collaborate on other aspects of their work, it was important that participants took a collaborative and supportive approach beyond the sessions and worked collaboratively for this project on individual ideas, and then papers, outside the sessions to ensure publishable outcomes in the timescale set.

Research Method

The objective of the research was to explore the effect of the learning approach by following the participants' learning journey through the programme. The population of the study consisted of twelve participants who had less than two years tenure at the University and been recruited as Education Lecturers to teach on Initial Teacher Education programmes or the Education Studies pathway of the BA Combined Honours Degree. Nine had been recruited because of specific teaching subject specialism, one because of school management and two educational researchers who had just completed PhDs in Education but were currently not researching and had no peer review experience.

To explore the effect of the teaching and learning approaches on the programme I used narrative analysis underpinned by phenomenological methodology with a number of investigative points over the time of the programme to follow the participants' development. To explore which aspects of the programme had helped

the participants I considered a number of transformational models of learning (Mezirow, 1996) before rejecting cyclical learning models such as Kolb and Fry's Experiential Learning Cycle (1975), and Gibbs' Reflective Learning Cycle (1988). Because the programme would end I did not want participants to over-reflect, but also because I had not designed the overall approach to be reiterative. While reflection was an important part of the programme, I felt it would be better for it to be continuous and within the course. I was aware of critiques of process and empirical validity of learning cycles (Webb, 2003, Bergsteiner et al., 2010) and felt they failed to represent the transformational learning aspects I was interested in exploring. I therefore considered linear or 'open' learning models such as Mendez and Johnsons 'S' Curve (2012) before deciding on an adapted model of a single open learning cycle based on Scharmer's Theory U (2009) (see Figure One, Theory U). This allowed the participants' progression to be categorised in stages and each explored as the course developed with the stages as points for exploration by interview.

Figure 1: Theory U (Scharmer, 2009)

I adapted the curve using Table One: *Five Movements on the Theory U Curve adapted for RaCES* (see below) to form the Interview Questionnaire (see Appendix One). This was used individually during stages one to four, and as a focus group session for each group for stage five after final session to collect group perceptions. For validity the

questionnaires were returned to the respective interviewees and the focus group results were disseminated to each group member for comments and accuracy verification. Data analysis was done through a thematic approach using narrative analysis which drew on critical comments and grouped themes.

Movement	**Adapted Description**
Co-initiating common intent	*Engaging or working with others to a common goal*
Co-sensing the field of change	*Realisation with others of the full potential of the enterprise idea*
Presencing inspiration and common will	*Developing the object and its potential*
Co-creating strategic microcosms	*Playing with the object with others to develop the academic purpose*
Co-evolving through innovations	*Becoming competent and writing the article*

Table One: Five Movements on the Theory U Curve adapted for RaCES

Development of questionnaire answers was achieved by a group dialogue when the programme finished. A group dialogue was chosen, partly because of the worry that individual respondents might feel uncomfortable about giving open answers in an individual interview due concerns about their confidence as new researchers and partly because it was felt that learning had been so group focused that feedback should be group focused too. Democratic dialogue is key component of developing meaningful action research (Gustavson, 2001). This allowed the group to feel safe in the group while responding. Because the groups were engaged in their own dialogue very early in the facilitated sessions, very limited open investigative research was done in the early parts of the project to avoid inhibiting the dialogue between group participants.

For the purpose of this paper the term ‘participants’ is used to identify the people involved in the groups, while ‘researcher’ refers to the author of the paper who studied the learning processes in the groups. Pseudonyms are bused in place of students’ real names.

Case Study: The RaCES Programme

The facilitated part of this project formed the focal point of the study and ran for four months. There were eight facilitated sessions. Twelve participants were selected and started the sessions with one lecturer dropping out due to move to another institution. Two other participants left the institution at the end of the programme but still completed conference paper. Seven participants were former schoolteachers with one recently qualified post-doctoral lecturer. The project was considered highly successful as feedback showed all staff felt the knowledge gap between non-researching lecturer and researching academic had been closed; the inhibitors to research had been overcome and the practical outcomes of completed individual research and dissemination had been achieved by all the participants.

Participants in the RaCES were chosen on the basis of ideas put forward in a call for enterprise ideas asking why their project should be considered for support and why it would be suitable for development into an academic paper. In the call for papers to access the programme, participants were informed that the methods of the sessions in the programme were highly creative, they would be part of a research process and informed consent would be obtained. The most appropriate ideas were chosen on the basis of their suitability for development into an academic paper. The intention here was to allow the participants to research outside their own subject areas where possible, taking away possible personal aspects of their work and subject critical evaluation, to avoid critical feedback in matter relating to their own work. Minimal information was given on the type of approach to be used to develop the papers, but strong emphasis was placed on the desired outcome, dissemination at an academic conference or a published academic paper. The ideas selected for the programme included various class-based teaching resources, and included: a children's reading book series, a game for developing motor skills in class, learn to play music videos, computer language games, and a resources database for busy teachers.

The sessions are summarised in Appendix 2: RaCES Programme Schedule. Groups were initially organized in their first session to aid learning and to form group cohesion (Mumford 1996). The early sessions used interactive facilitation focused on creativity and team-building exercises to help generate research ideas. Participants worked together to build a physical representation of their enterprise idea from clay and paint which they

termed ‘the research object’. These were then given a name e.g. Alice’s object was ‘a Giant Slipper’, from the children’s storybook she was writing for her enterprise idea and which later became her research statement about embedding pedagogy in a children’s storybook. Then a more critically reflective approach was adopted by the facilitator and other participants could question, critique and evaluate the research object to focus their research idea. Objects could be changed, post-its added with questions and developed, and could be as abstract as the creator required. These activities were also designed to create a sustainable academic community of practice (Wenger, 1998) as a method of creating a working framework which would continue beyond the facilitated sessions. The sessions titles were:

1. Introduction to RaCES
2. Building Your Research Object
3. Exploring your research with others
4. Developing connected ideas
5. Abstracts
6. Critical evaluation and Problem Solving
7. Writing groups/Writing Workshop
8. Bringing it all together: Future objectives

In week six participants were asked to submit an abstract of their academic paper which would begin the process of developing a full paper. An international enhancing-practice conference was targeted prior to the fourth session and advised to the students, although this was explained as a default position and other conferences or journals were encouraged.

The overall taxonomy provided for a facilitation approach on the delivered sessions and encouraged the development of group collaboration to start individual academic research. The participants focused on their object for critiques and problem-solving and often referred to this as their research in later sessions, even when they conducted their own individual research, but the groups supported personal and academic development in a collaborative manner by working together outside the session. Critical reflection was encouraged throughout once the research object had been finished critical reflection of research ideas were done by referring to the object.

Findings

A thematic analysis drew out key themes though the five stages of the U. The two stages on the down slope of the curve co-Initiating, co-sensing gave similar results and were combined, but the final three stages gave more distinct results. These are shown below in Table Two: *Factors in the Early Stages of Novice Researcher Development Using Facilitated Collaborative Learning.*

The initial question asked why they had not researched before. Here some of the inhibitors discussed above were important. The most popular themes were identified as: something to get them started on their research; status, as they saw researchers as a higher grade; uncertain outcomes as a return on their efforts; heavy workload and a perceived lack of self-confidence, all of which led to uncertainty that they were capable of researching at an appropriate level. Nearly all of the participants offered the initial opinion that an expert in their field would be necessary to see if their ideas had value as research.

Stage	**Factors**	**Themes**	**aged tion**
Initial		Status Workload Uncertain Outcomes Lack of Confidence Knowledge Uncertainty	
Early Stage: Down the U	Co-Initiating, Co-sensing	*Testing* (Value and Validity of Initial ideas) *Dialogue* (with people outside their subject area) *Team as a critical friend* *The Research Object* *Individual stage* (similar) *Confidence low* *Community* *Facilitator Dependency* *Group reliance* *Esteem on research still low but variable*	Group facilitation Group instigation Team building Empathy Sympathy Research Object
Middle Stage: U Bottom	Co- Presencing	*Community* (Developed) *Individual stage* (diverse) *Confidence* (Improving) *Facilitator Independent*	Group facilitation Independent group collaboration Research Object

		Group as a facilitator/provider *Esteem improving on realisation of worth* *Research Object*	Resources
Happening Stage: Up the U	Co-creating	*Individually centred* *Research Object* *Group supportive* *Confidence (still improving)* *Esteem Improving*	Facilitate from distance Research object Group as continuing reflective resource Maintain esteem as a priority
Focus Group	Co-evolving	*Esteem high* *Risk taking* *Autonomy* *Still uncertain of outcome but confident of ability* *Group highly coherent and motivated*	

Table Two. Factors in the Early Stages of Novice Researcher Development Using Facilitated Collaborative Learning.

The second stage of interviews on the U contained questions dealing with **co-initiating**. This is the connection to the context and the people in the situation. In the programme this was the facilitator and the other participants. It investigated the role of the situation and the group in the explanation of their research idea in sessions one and two. This confirmed that starting researching was an important concern among the participants. However, the groups felt this worry had dissipated as they went on to session 2. A subject expert was not mentioned and just having "different eyes" (Sharon), to get an opinion and to "test whether my findings were as important to others as to me" (Pearl) showed the first real change in the group's confidence. Donna said "I knew I could find subject specialists later if I needed them". This suggests that the participants had overcome a need for absolute ratification of their ideas. There was also concern in some statements on the questionnaires which was reflected again in the focus group dialogue as words such as "personal credibility" were popular and the importance of a "safe environment" were used. The group as a general entity, rather than a specialist forum was seen as very important. Keeping the group largely at the same stage of development was also a factor in developing confidence and Naomi explained "You never felt forced to say anything…I saw them (other group members) in terms of my struggle". This also suggests people felt

growing confidence very early in the programme. Gaining confidence in their own research at an early point is therefore a key factor amongst novice researchers.

Collaborating as a team was also a common theme when investigating this early stage. Alice said, "I didn't feel working together was important to my research, but in reality we (the group) worked as a team and it did certainly contribute significantly to my paper". Comments were also made about how important it became to support other team members. "A strong focus for me became my own emotional response to the other team members" (Pearl) which indicated a high level of commitment to the team process. At the focus group it became apparent that the facilitation approach had also played a key part in this early development. Stetler et al. (2006) state facilitation is an important part of implementation exercises, but they note it is not well defined or studied. In our group focus sessions a response to the word facilitation brought out the following words: personal, genuine, empowering, educator, no teaching. Facilitation appears to have contributed to the development of a feeling of empowerment which may have also helped overcome a lack of confidence early in the programme.

Deleted: words:personal

Co-sensing was used to assess the importance of the level of interaction with the group in terms of talking, listening and empathizing at the end of session four. Co-sensing is where you really begin to explore ideas: "The places of most potential" (Scharmer 2009: 6). This is where the ideas and topics for research are found and value recognized. Here responses such as "I was able to learn from others views and experiences and develop my own thinking," (Peter) and "In time, this (dialogue) developed into an understanding of how some of these (issues) were shared" (Sharon) appeared to show a much deeper understanding and empathy with other participants. The importance of group-belonging was emphasized regularly in the questionnaires and the group dialogue. This was summed up by the Peter, "The sense of community is one that has been instrumental in directing the development of the paper". Interaction and sharing (even bad ideas) was therefore very important. Participants also made comments about the time available. There was an awareness by this stage that time together was precious and some participants worked in their own time e-mailing and meeting up.

The bottom of the U, co-presencing, is the realisation from the group that their ideas had value in their own right, and in addition to the interview plan questions the participants

were asked to consider when they realised they had a viable research paper. Was there a recognized moment of illumination or cross-over from non-researcher to researcher? The importance of the research object was highlighted here. Alice mentioned her object - a giant slipper - to explain the way she referred to her research early on. The slipper and a physical object from the children's book she was going to write. After being very nervous after the fifth session she explained she was happy for others to feedback on her paper because "I had a feeling what I was going to do and how to do it", and "there was a match between my data collection issues and the subsequent dialogue in the group". For a couple of the participants it became a matter of reiteration and continually refining processes until a topic was better defined "during questioning by the group" (Petra). This suggests there is a realization among individuals they have turned up at the bottom of the U but not necessarily at the same time. This had implications for the facilitator as the group's individuals look to be hitting the U at different times, suggesting the group was now at different stages of individual development. Some students were happy for their paper to be directly critiqued at this stage, but most preferred it to be done through their research object as it "...just didn't feel like they were criticizing me" (Sharon). At this stage the participants all felt they needed to continue working together and focus-group responses suggested the group was more important than the facilitator.

Deleted: feed back

The final stages of the U as participants move up the curve are where things begin happening and was done after the final session. C**o-creating** is where ideas develop into something more concrete. At the interview after the planned questions the participants were also asked how far they could take their own research individually and as a group. A number of people at this stage had begun to develop their own work individually outside the group on research, and one participant had a journal article accepted. All participants expressed a desire to continue as part of a group to test and get feedback from future work.

Continuation was also mentioned in the **co-evolving** stage. This was where groups move out into the wider world with their ideas. Here the groups had continued to work together after the RaCES sessions had ended. This is the final stage of this study, but by this stage the group, while collaborating on their conference presentation, were using each other in a different way. Comments suggested that collaboration was being used to test, rather than develop, ideas. The reliance on the group had diminished for most of the

participants as they gained self-confidence and, while they explained they would keep in contact with each other, they felt the group would be used as a sounding board for future research ideas and critiques rather than critical support. Group and facilitation were less important going up the U than coming down.

At the group dialogue the group was asked to shout one or two words each to describe their transition to researcher. The following again suggested confidence as a critical factor, but at this stage it was high. These were the answers.

- *willing to take risks*
- *creativity*
- *empowered*
- *embodied*
- *ownership*
- *enabled*
- *transition (as in travelled)*
- *understanding*

It appears that new lecturers and non-researching lecturers in universities could benefit from the type of semi-structured group collaborative approach used in RaCES. The effect of this collaborative approach, however, diminishes as the programme moves on. This is show in Table Two: *Factors in the Early Stages of Novice Researcher Development Using Facilitated Collaborative Learning.* This table highlights the three important stages identified by Theory U, down the curve as people re-set their ideas and notions, a realisation of competence and self-abilities at the bottom, and the development of outputs up the curve. This gives factors which begin the transition from non-researcher to researcher. The early stages appear to be critical to the success of the programme. Using creative and dialogue-based techniques to facilitate sessions I have identified an approach which breeds collective confidence and empowers participants to take on and value their own research. During the early stage of the programme the participants began gaining confidence, rather than any technical or research skills, and gain a sense the value of their research. This creates self-esteem and is one of the critical motivators in overcoming the inhibitors (Rhea, 2010).

Deleted: collaborative approach

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As the reluctance to research was investigated, the findings from both groups correlated. They recognised a need to contribute to university research output, but were initially reluctant to do so: workload, status, confidence and esteem, and a feeling of being apart from the 'academic' community were inhibitors. Hancock (1997) argues that people who perceive themselves as teachers make reluctant researchers, and cites four main reasons which were similar to those reflected in our group. He cites teachers' professional status (or lack of it), working conditions, confidence and integrating research as an insider with outside approaches as reasons for teachers being unwilling or unable to actively research or disseminate classroom findings. Hancock's findings were reported about teachers in schools, but research with the RaCES participants show these inhibitors are still evident as teachers make the transition to lecturing academics higher education institutions.

There was a perception amongst participants that they had been employed as lecturers because of their teaching excellence or ability to lecture and were having to become researchers due to circumstances. A number of comments about status were made which suggested status was a key issue among the participants generally. Comments similar to John's, "you have to remember we came as lecturers not researchers, it's a big change for us", were made by a number of participants in the group focus sessions and there was also a perception that the type of research teachers were generally doing was not appropriate for the current university strategic profile. Early in the programme some participants were unsure if certain approaches to research were acceptable, *"They don't want action research, it's academic research they want" (Sharon),* This might have helped explain the participants' general willingness to start on a programme which had started out with its a focus on enterprise and away from their subject specialism. Enterprise had been the focus of the call for participants and it is possible that they felt more comfortable adapting their own subject or classroom ideas for enterprise work as it was also less personal when critiqued.

Discussion

The task of teaching is largely a social one and has a heavy '*Investment of self*' (Hancock 1997:87). Teaching involves social interactions on a constant basis and often eats into personal time with marking and planning done outside contractual hours. Williamson and Myhill (2008:25) explain how the concept of '*work intensification*' has put teachers

under a state of *'constant bombardment'* as teachers are given more and more administrative and managerial tasks in an ever more complex environment. These were highlighted by all the RaCES participants and Hancock's ideas of investment of self, great and tiring social interactions and a lack of personal time with marking and planning done outside contractual hours would appear to be a common concern among teachers and lecturers. More specific HE studies such as Finnegan and Hyle (2009) discuss working conditions and workload for higher education lecturers in the United States in some depth and explain the encroachment of a productivity culture in HE Institutions, while in the United Kingdom Sykes, (2006) also discusses the strain on academics cause by increasing pressure to create a quantity and quality of research output. These all contribute to an initial reluctance to add to a busy workload by researching.

Workload and time concerns were evident from the start of the programme and mentioned in the first interviews, even though an arrangement was made with the participants' managers to ring-fence time for participants to prioritise the programme. However, this support was not universal in fact and some tutors still had to organise their own cover for classes and leave sessions to deliver classes. Some also missed parts of sessions due to other commitments such as course-team meetings. This may be an issue of wider organisation and beyond the control of the participants, but it still shows working conditions some for teachers are an inhibitor to research, even amongst a highly motivated group. This was also mentioned in the focus groups, even though it wasn't specifically asked for. It seems that unhelpful working conditions and workload are inhibitors to beginning research. The issue of cover from general duties is also an important one psychologically. If teaching and related activities take priority over research then it could be questioned by staff whether research is really is an important priority in the institution.

Hemmings and Kay (2010) state a lack of confidence inhibits research, but on RaCES working with others to improve self-esteem seemed to help. Increasing confidence was reported by all the RaCES participants as the programme progressed. Some of the participants' Self-esteem is one of Maslow's higher order motivators (Maslow, 1970) and can be difficult to define but gives "an abiding sense of worthiness as a person", (Mruk 2006: 3). Improving this would help to remove the lack of confidence to research and

allow the investment in producing worthwhile or acceptable research to be seen as an opportunity.

Participants were worried their type of research might not be appropriate to current academic requirements which also contributed to the reluctance to start researching. A number of comments were made that practitioner or action research, where specific practical events could be studied in groups, were initially felt by some as less desirable to the University academic effort than scholarly activity or pure academic endeavors (although interestingly no one could really define these terms). It seems University teachers and new lecturers still see themselves as people led by 'outsiders.' Academic researchers were seen as distant to all the participants, and even where academics were also teachers there was a perception that they are apart from researchers by the type and/or level of research they do. This last comment suggests there is a knowledge gap for new teachers beginning higher education delivery, and findings from the RaCES programme show that there is a clear need for a structured approach to developing research capability in new higher education lecturers if they are to become researching academics.

The findings here show it is important to overcome inhibitors and the facilitation and that collaborative learning approach with the research object was an important aspect of this. The initial journey down Scharmer's 'U' showed inhibitors were a key concern, but once the bottom of the 'U' had been reached the inhibitors of lack of confidence, research acceptance and role uncertainty were rarely mentioned or as a past event: something which had happened, but wasn't significant anymore. Once the participants started up the 'U' the lack of confidence was replaced by a growing feeling of esteem and they became of negligible importance. This begs the questions, had the inhibitors disappeared? Or why had they become irrelevant? This was asked in the focus groups but answers given were diverse and inconclusive.

Their research objects provided lively responses in the group focus sessions. Alice said she "…clung on to her giant slipper like a comfort blanket.." and in a thoughtful approach John wondered what he was doing making a bridge in the first session, but as post-its were added it began to help him conceptualise the direction his paper would take. In the end he saw his journey in terms of crossing the bridge and he looked back with his paper

in some sort of order over the bridge. Others in the group agreed. All the group felt this made the development of their ideas easier and were still using them at the end of the programme to adjust and re-order their research. The use of the object on a regular basis in the sessions and in their private deliberations seemed to form a lot of small reflections or perhaps 'micro-reflections'. It was difficult to explore the notion of these micro-reflections in the time available, but Hoggan (2014, 2016) explores the use of removing the personal aspects of serious disease by giving it a name so people can discuss it, concluding benefits for treatment approaches and this removal of the participants' research discussion from the researchers to the objects seems to have been a critical aspect in helping the early and middle stages of their research.

When asked about their overall experience in the focus group session, phrases such as "I didn't think I could do it", (Petra) and "I would never have been able to do this on my own" (Donna) all indicated limited confidence or self-esteem at the outset. Among the groups it was lack of confidence which appeared to stop people initiating research, but once the research was under way people could research while still having self-doubts supported by their peers. Phrases from participants such as, "I wasn't sure this would be acceptable (research) until I came on this programme", and "why research if it's not what they want?" indicate uncertainty and influences the decision to research. Rather than a skills or attitude problem, it is more of a risk and confidence problem.

Limitations of the Research

This research used an adaptation of a staged open learning cycle to explore transition stages in people. A number of studies argue that groups are unlikely to progress all at the same rate and at the same level, and this is the finding here. Facilitation approaches and the emphasis on team approaches to collaborative learning, rather than specific research knowledge acquisition, perhaps helped this. The author as the researcher was also heavily involved in the design if not the delivery of the programme and the investigation which may lead to insider bias, and this has been acknowledged through the article. The research and the program design were not specifically formed to find inhibitors. More emphasis may have been placed on this aspect as it was added to the investigation as a theme after the start when the inhibitors were talked of retrospectively, and this might have been worthwhile earlier.

Future Research

This paper adds value to the growing body of research into the way early career researchers begin their academic journey as researchers. The exploration of inhibitors to research is a key area for future research and the use of programmes, support or events to start or make this journey easier in an ever more complex and pressured higher education environment will provide a rich field for exploration. The research also left the reflective aspects of the participants' journey out of the investigation partly because of the initial rejection of reflective learning cycles in the methodology, yet discussions in the focus group showed a constant reiteration of ideas and concepts from the participants, suggesting an understanding of this micro-reflective process may be worthwhile in future studies of this type.

Summary

All of the researchers had abstracts accepted and presented at international conferences, and within a year three subsequently had journal articles published which achieved the objective of the RaCES programme. The research of the programme identified a clear research dichotomy amongst staff who see themselves as teachers rather than researchers in higher education. All HE providers need teaching or lecturing staff to provide classes and some are now being asked or required to become researchers. The findings from this programme show there is a willingness to research among teaching or lecturing staff, and the skills are there or surmountable, but the problems centre around four critical areas:

- *Instigation.* Teachers new to research are reluctant to research without some form of instigation to get them started.
- *Confidence.* Teachers new to research are reluctant to start researching because they are unsure what is acceptable to the institution.
- *Self-esteem* can help negate a lack of confidence and appears critical to the progress of research once started.
- *Return on Investment.* Teachers new to research have given value to their institution by tutoring and will need some certainty that their work will acceptable at their institution.

Lack of confidence and certainty appear to underpin the reluctance to start researching, but on the RaCES project it was less of a hindrance once the initial phase of choosing the topic and an approach to collaboration.

While the above ideas are generally about applying group solutions to organizational situations, Wenger (1998) reverses the process and develops social learning ideas from classroom situations and applies them to organizations using a case study approach. Wenger argues the need to re-think learning along three conceptual plains: as individuals, engaging and contributing to the practices of their communities; for communities, where practice is refined and introduced to new participants; and for organizations which need to sustain and connect communities of practice. The managed facilitation approach offers this.

This study shows that the four factors which inhibit teachers researching (Hancock 1997) similarly affect non-researching teachers delivering higher education (Hemmings and Kay, 2010). These manifest strong inhibitors under certain conditions, namely where confidence to research is low, conditions of uncertainty, management support is not evident, and where there is a risk of no return on investment in time and effort. An instigation programme or event can help overcome these inhibitors and this article advocates the use of a facilitated collaborative learning approach, careful nurturing of a team approach and the removal of the researcher from the centre of the research and research discussions can instigate research from teachers and support the early career research process.

Ethics Statement

Ethical considerations to this type of study are important as not only protect the people involved but give participants a feeling of security in their answers. The principle of informed consent was used. Participants were informed as required under university ethical regulations that in addition to the project they would be partaking in an overarching piece of research by the organizers and given the opportunity to withdraw if they wished or not to answer questions.

Appendix One – Interview Questionnaire

This questionnaire tests the importance of collaborative groupwork in the RaCES programme in the **development of your academic paper** under a number of Scharmers' (2009) key Theory U headings.

Name (Optional)_____

Please tick the appropriate box and explain your answer

	STAGE 1. Co-initiating
	Why have you not researched before? How do you feel about starting now?
	Talking to other people about yourself and your papers development?
	How do you feel about: Collaboration and your research? Groupwork? Team belonging? Sharing ideas?
	STAGE 2. Co- sensing
	How important is listening to others and dialogue with others in your group?
	How important is a sense of belonging to the group to the development of your paper?
	STAGE 3. Co- Presencing
	Have you begin to grasp the key aspects of research for your paper? If so when and what made you realise this?
	How do you feel about your research expertise? Why?
	Do you feel your research is unique? Why?
	Stage 4. Co-creating
	How far do you think you could take your research i. Individually? ii. With your group?
	Stage 5: Co-evolving

	Would your group be important in exploring new avenues of development for your research?
	Describe how you see your overall transition to a researcher as experienced through the collaborative/group work (if you felt you got that far).

Appendix 2: RaCES Programme Schedule

Session	Title	Summarised Content	Outcomes
1	Introduction to RaCES	▪ Introduce participants to objectives and programme ▪ Icebreaker – Each other. Give their idea an imaginative name and describe it in 30 words ▪ In groups of 3: Discuss fears and hopes. ▪ Exposition on What makes research (Empirical, Validity, Integrity, Triangulation etc.) ▪ In groups of 3 to produce a more detailed flip chart outline of their idea and outline what their research will be about. ▪ Feedback to inform full group ▪ Discuss basic research approaches to their idea. e.g. academic justification, resource investigation, literature approach. ▪ *For next session: Begin identifying research methodology and methods*	
2	Building Your Research Object	▪ *From previous week: Outline ideas on research methods and methodology* ▪ Creativity PPT, L/H R/H Brain, H and P thinkers, Bono. Alien Ex. ▪ Groups of 3 - Lego arch – team to build a Lego Arch and pass under it ▪ Whole group round robin on what they could build to represent their research. ▪ Individually: Begin building research objective. ▪ Explaining research object to rest of group ▪ Begin adding key themes to the object as physical additions (Representing: areas to explore, difficult aspects, fuzzy aspects, etc. concerns) *For next session: Identify a set of references to support your work.*	***Stage One Interviews: Co-initiating***
3	Exploring your research with others	▪ *From Previous Week: Feedback on referencing discoverie* ▪ Exposition: Collaborative Learning. Does and Don't ▪ Full group: Introducing your group to your object. ▪ Questions ▪ Development workshop ▪ Feedback to Objective using creative additions. ▪ Photographs of object. ▪ Portfolio introduction – organising research ▪ De-brief ▪ Add research detail to object in writing. ▪ *For next session: Begin comments on Moodle thread of photos ;Research suggestions.*	
4	Developing connected ideas	▪ *From Previous Week: Feedback Moodle Research suggestions. Discuss ways forward.* ▪ Exposition on connectivism, transitional learning and transformative learning. ▪ Ideas farm to develop and grow group 'research bank' (directed). Developing ideas with Images. ▪ Sharing Ideas. ▪ Revisiting research objects ▪ Exchanging ideas from research bank. ▪ 'Quality Research' from peer reviewed article. ▪ 1st critical evaluation. ▪ Add critiques of research to object as objects or by writing on it. ▪ *For next session: Write up thier formative abstract*	***Stage Two Interviews: Co-sensing***
5	Abstracts	*From Previous Week: Review formative abstract and discuss* ▪ Exposition: Systematic Literature Review for Publishing Articles. ▪ All groups search for support for references ▪ Post to object for discussion for each participant.	

		▪ Develop abstracts for exposition to board. ▪ Review and critique. ▪ Add paper copy of abstract to research to object. ▪ *For next session: Review abstracts and discuss*	
6	Critical evaluation Problem Solving	▪ *From Previous Week: Ideas on initial problems with research object.* ▪ Groups of 3: Moving Squares Activity ▪ Exposition: Problem Solving and Solution Generation in Groups ▪ Group identification of possible research problems fed back through research object ▪ Add critiques ▪ Adjustments considered individually and fed back. ▪ Solving identified problems ▪ Feedback to group. ▪ Add remaining critiques of research to object with formative solutions. *For next session: Identify recent articles to support research and summarise importance*	***Stage Three: Presencing***
7	Writing groups/Writing Workshop	*From Previous Week: Runthough of summaries* ▪ Exposition: Writing Up Research ▪ Workshop: Approaches to Peer Review ▪ Group discussion of various Peer Review form ▪ Using forms all group does Peer Review of each participants research and ass to Research Objects using small/large 'Post It's' ▪ Prepare replies. ▪ Feedback Replies ▪ Add to object as research considerations ▪ Outline of Enhancing Practice Conference Call *For next session: Identify target Conference Journals if different. Prepare rough draft for Conference call or Journal Abstract*	
8	Bringing it all together: Future objectives	*From Previous Week: Review Call or abstracts* Exposition: What makes an excellent article ▪ In 2 Teams: Prisoners Dilemma Activity (Win/Win in groupwork) ▪ Final critiques of research added to objects ▪ Development of outstanding themes and concepts ▪ Discussion of continuing working practice ▪ Summary and close. *Continuing: Workgroup dates and /or Moodle collaboration organised.*	***Stage Four Interviews: Co-creating***
		Focus Group Sessions: Co-evolving	

Deleted: UpResearch

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